

IN THE CLAIMS:

Claim 1 (currently amended) A ~~peptide derivative~~ peptidomimetic compound having general formula $X-CX_1-NH-AA_1-CONH-AA_2$ wherein X is a heterocyclic or unusual amino acid, X_1 is O or H_2 H and AA_1 and AA_2 are amino acids.

Claim 2 (currently amended) A ~~peptide derivative~~ peptidomimetic compound according to claim 1 wherein X is a heterocyclic selected from the group consisting of F-moc-3- (2-furyl)-L-alanine, F-3- (3-thienyl)-L-alanine, 4-Fmoc-piperazine-1-yl-acetic acid hydrate, Fmoc-3, 3-diphenyl-L-alanine, 1-Fmoc-azetidine-3-carboxylic acid, Benzimidazolepropionic acid, Fmoc1,2,3,4 tetrahydroquinoline-3-carboxylic acid, 2-oxo-4-phenyl-3-oxazolidine-acetic acid, 5-Methoxy-2-methyl-3-indole acetic acid and 5-Mercapto-1-terazole acetic acid.

Claim 3 (cancelled)

Claim 4 (currently amended) A ~~peptide derivative~~ peptidomimetic compound according to claim 1 wherein AA_1 and AA_2 are the dipeptide for position ~~AA_1-AA_2~~ , is selected from the group consisting of Orn-Pro, Cha-Pro, Ile-Pro, Dap-Pro, Val-Trp, Lys-Pro, Lys-Trp, Orn-Trp, Dap-Trp, Ile-Phe, β -Ala-Pro, Pro-Pro and Cha-Trp.

Claims 5 and 6 (cancelled)

Claim 7 (currently amended) A ~~peptidomimetic~~ peptidomimetic compound according to claim 1

wherein the concentration of the peptidomimic compound for 50% inhibition of ACE activity (IC_{50}) ~~ranged~~ range from 2 ~~μ mole~~ to 10 micromolar ~~μ mole~~ in in-vitro condition using synthetic substrate Hippuryl-Histidyl-Leucine (HHL).

Claim 8 (currently amended) A ~~peptidomimic~~ peptidomimetic compound according to claim 1 wherein ~~the a~~ dose of the ~~synthesized ACE inhibiting peptidomimic~~ peptidomimetic compound which ~~effectively blocked~~ blocks angiotensin converting enzyme ranges between 5- 8 mg/kg of body weight of a mammal.

Claim 9 (currently amended/withdrawn) A process to synthesize ~~the peptide derivative~~ peptidomimic peptidomimetic compound of claim 1, comprising

- (a) coupling ACE inhibiting antihypertensive ~~peptidomimic~~ peptidomimetic molecule wherein a heterocyclic or unusual amino acid present at ante-penultimate position is coupled to a dipeptide with amino acids present at ultimate position and penultimate position;
- (b) synthesising dipeptide on a solid support by coupling and deprotection;
- (c) coupling the heterocyclic or unusual amino acid to deprotected dipeptide at the N- α terminal of dipeptide;
- (d) cleaving the synthesized ~~peptidomimic~~ peptidomimetic compound of step (c) from solid support followed by purification and characterization;

Claims 10 - 17 (cancelled)

Claim 18 (currently amended) A method for inhibiting angiotensin converting enzyme in a

mammal comprising providing the ~~peptide derivative peptidomimic~~ peptidomimetic compound of claim 24, and administering the ~~peptide derivative peptidomimic~~ peptidomimetic compound to the mammal as an angiotensin converting enzyme inhibitor.

Claim 19 (currently amended/withdrawn) The method according to claim 18 wherein the ~~the peptide derivative peptidomimic~~ peptidomimetic compound is administered to the mammal in a dose effective to block angiotensin converting enzyme in the mammal, said dose ranging between 5- 8 mg/kg of body weight of the mammal.

Claim 20 (currently amended/withdrawn) Method for the inhibition of angiotensin converting enzyme in a subject suffering from hypertension comprising administering to the subject a pharmaceutically effective amount of the ~~peptide derivative peptidomimic~~ peptidomimetic compound of claim 1 with a pharmaceutically effective carrier.

Claim 21 (withdrawn) Method according to claim 20 wherein the subject is a mammal.

Claim 22 (withdrawn) Method according to claim 20 wherein the subject is a human being.

Claim 23 (currently amended/withdrawn) Method according to claim 20 wherein the ~~peptide derivative peptidomimic~~ peptidomimetic compound is administered to the subject in a dose which effectively blocks angiotensin converting enzyme in the subject, said dose ranging between 5- 8 mg/kg of body weight of the subject.

Claim 24 (currently amended) The ~~peptide derivative peptidomimic~~ peptidomimetic compound according to claim 1, wherein AA₁ is ornithine and AA₂ is proline.

Claim 25 (currently amended) The ~~peptide derivative peptidomimic~~ peptidomimetic compound according to claim 24, wherein X is L-Abrine.

Claim 26 (currently amended) The ~~peptide derivative peptidomimic~~ peptidomimetic compound according to claim 1, which is represented by general formula X-CX₁-NH-AA₁-CONH-AA₂ wherein AA₁ is ornithine and AA₂ is proline.

Claim 27 (currently amended) The ~~peptide derivative peptidomimic~~ peptidomimetic compound according to claim 26, wherein X is L-Abrine.

Claim 28 (new). The peptidomimetic compound according to claim 1, wherein the peptidomimetic compound is selected from the group consisting of (a) L-Abrine-Orn-Pro, 3-(3-thienyl)-L-alanine-Orn-Pro, 3-(2-furyl)-L-alanine-Orn-Pro, 2-Benzimidazoleacetic acid-Orn-Pro, 5-Hydroxytryptophan-Orn-Pro, Homotryptophan-Orn-Pro, Homophenylalanine-Orn-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Orn-Pro, Azetidine-3-carboxylic acid-Orn-Pro, Cyclohexylalanine-Orn-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Orn-Pro, and 4-piperazine acetic acid-Orn-Pro.

Claim 29 (new) A peptidomimetic compound according to claim 1 wherein X is an unusual amino acid selected from a group consisting of 5-Hydroxytryptophan, L-Abrine, L-β-

homoproline, β -HomoTrp-OH, Homophenylalanine L- β -homotryptophan, L-2-propargyl glycine, 3,3 Diphenylalanine, L- β -Homohydroxyproline and Cyclohexylalanine.

Claim 30 (new) A peptidomimetic compound according to claim 1 wherein the peptidomimetic compound is selected from the group consisting of:

(a) L-Abrine-Orn-Pro, 3-(3-thienyl)-L-alanine-Orn-Pro, 3-(2-furyl)-L-alanine-Orn-Pro, 2-Benzimidazoleacetic acid-Orn-Pro, 5-Hydroxytryptophan-Orn-Pro, Homotryptophan-Orn-Pro, Homophenylalanine-Orn-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Orn-Pro, Azetidine-3-carboxylic acid-Orn-Pro, Cyclohexylalanine-Orn-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Orn-Pro, 4-piperazine acetic acid-Orn-Pro;

(b) L-Abrine-Cha-Pro, 3-(3-thienyl)-L-alanine-Cha-Pro, 3-(2-furyl)-L-alanine-Cha-Pro, 2-Benzimidazoleacetic acid-Cha-Pro, 5-Hydroxytryptophan-Cha-Pro, Homotryptophan-Cha-Pro, Homophenylalanine-Cha-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Cha-Pro, Azetidine-3-carboxylic acid-Cha-Pro, Cyclohexylalanine-Cha-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Cha-Pro, 4-piperazine acetic acid-Cha-Pro;

(c) L-Abrine-Ile-Pro, 3-(3-thienyl)-L-alanine-Ile-Pro, 3-(2-furyl)-L-alanine-Ile-Pro, 2-Benzimidazoleacetic acid-Ile-Pro, 5-Hydroxytryptophan-Ile-Pro, Homotryptophan-Ile-Pro, Homophenylalanine-Ile-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Ile-Pro, Azetidine-3-carboxylic acid-Ile-Pro, Cyclohexylalanine-Ile-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Ile-Pro, 4-piperazine acetic acid-Ile-Pro;

(d) L-Abrine-Dap-Pro, 3-(3-thienyl)-L-alanine-Dap-Pro, 3-(2-furyl)-L-alanine-Dap-Pro, 2-Benzimidazoleacetic acid-Dap-Pro, 5-Hydroxytryptophan-Dap-Pro, Homotryptophan-Dap-Pro, Homophenylalanine-Dap-Pro, 1,2,3,4-tetrahydro isoquinoline-3-

carboxylic acid-Dap-Pro, Azetidine-3-carboxylic acid-Dap-Pro, Cyclohexylalanine-Dap-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Dap-Pro, 4-piperazine acetic acid-Dap-Pro;

(e) L-Abrine-Val-Trp, 3-(3-thienyl)-L-alanine-Val-Trp, 3-(2-furyl)-L-alanine-Val-Trp, 2-Benzimidazoleacetic acid-Val-Trp, 5-Hydroxytryptophan-Val-Trp, Homotryptophan-Val-Trp, Homophenylalanine-Val-Trp, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Val-Trp, Azetidine-3-carboxylic acid-Val-Trp, Cyclohexylalanine-Val-Trp, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Val-Trp, 4-piperazine acetic acid-Val-Trp;

(f) L-Abrine-Lys-Pro, 3-(3-thienyl)-L-alanine-Lys-Pro, 3-(2-furyl)-L-alanine-Lys-Pro, 2-Benzimidazoleacetic acid-Lys-Pro, 5-Hydroxytryptophan-Lys-Pro, Homotryptophan-Lys-Pro, Homophenylalanine-Lys-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Lys-Pro, Azetidine-3-carboxylic acid-Lys-Pro, Cyclohexylalanine-Lys-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Lys-Pro, 4-piperazine acetic acid-Lys-Pro;

(g) L-Abrine-Lys-Trp, 3-(3-thienyl)-L-alanine-Lys-Trp, 3-(2-furyl)-L-alanine-Lys-Trp, 2-Benzimidazoleacetic acid-Lys-Trp, 5-Hydroxytryptophan-Lys-Trp, Homotryptophan-Lys-Trp, Homophenylalanine-Lys-Trp, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Lys-Trp, Azetidine-3-carboxylic acid-Lys-Trp, Cyclohexylalanine-Lys-Trp, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Lys-Trp, 4-piperazine acetic acid-Lys-Trp;

(h) L-Abrine-Orn-Trp, 3-(3-thienyl)-L-alanine-Orn-Trp, 3-(2-furyl)-L-alanine-Orn-Trp, 2-Benzimidazoleacetic acid-Orn-Trp, 5-Hydroxytryptophan-Orn-Trp, Homotryptophan-Orn-Trp, Homophenylalanine-Orn-Trp, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Orn-Trp, Azetidine-3-carboxylic acid-Orn-Trp, Cyclohexylalanine-Orn-Trp, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Orn-Trp, 4-piperazine acetic acid-Orn-Trp;

(i) L-Abrine-Dap-Trp, 3-(3-thienyl)-L-alanine-Dap-Trp, 3-(2-furyl)-L-alanine-Dap-Trp, 2-Benzimidazoleacetic acid-Dap-Trp, 5-Hydroxytryptophan-Dap-Trp, Homotryptophan-Dap-Trp, Homophenylalanine-Dap-Trp, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Dap-Trp, Azetidine-3-carboxylic acid-Dap-Trp, Cyclohexylalanine-Dap-Trp, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Dap-Trp, 4-piperazine acetic acid-Dap-Trp;

(j) L-Abrine-Ile-Phe, 3-(3-thienyl)-L-alanine-Ile-Phe, 3-(2-furyl)-L-alanine-Ile-Phe, 2-Benzimidazoleacetic acid-Ile-Phe, 5-Hydroxytryptophan-Ile-Phe, Homotryptophan-Ile-Phe, Homophenylalanine-Ile-Phe, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Ile-Phe, Azetidine-3-carboxylic acid-Ile-Phe, Cyclohexylalanine-Ile-Phe, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Ile-Phe, 4-piperazine acetic acid-Ile-Phe;

(k) L-Abrine- β -Ala-Pro, 3-(3-thienyl)-L-alanine- β -Ala-Pro, 3-(2-furyl)-L-alanine- β -Ala-Pro, 2-Benzimidazoleacetic acid- β -Ala-Pro, 5-Hydroxytryptophan- β -Ala-Pro, Homotryptophan- β -Ala-Pro, Homophenylalanine- β -Ala-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid- β -Ala-Pro, Azetidine-3-carboxylic acid- β -Ala-Pro, Cyclohexylalanine- β -Ala-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid- β -Ala-Pro, 4-piperazine acetic acid- β -Ala-Pro;

(l) L-Abrine-Pro-Pro, 3-(3-thienyl)-L-alanine-Pro-Pro, 3-(2-furyl)-L-alanine-Pro-Pro, 2-Benzimidazoleacetic acid-Pro-Pro, 5-Hydroxytryptophan-Pro-Pro, Homotryptophan-Pro-Pro, Homophenylalanine-Pro-Pro, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Pro-Pro, Azetidine-3-carboxylic acid-Pro-Pro, Cyclohexylalanine-Pro-Pro, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Pro-Pro, 4-piperazine acetic acid-Pro-Pro;

(j) L-Abrine-Cha-Trp, 3-(3-thienyl)-L-alanine-Cha-Trp, 3-(2-furyl)-L-alanine-Cha-Trp, 2-Benzimidazoleacetic acid-Cha-Trp, 5-Hydroxytryptophan- Cha-Trp, Homotryptophan-Cha-Trp, Homophenylalanine-Cha-Trp, 1,2,3,4-tetrahydro isoquinoline-3-carboxylic acid-Cha-Trp, Azetidine-3-carboxylic acid-Cha-Trp, Cyclohexylalanine-Cha-Trp, 2-Oxo-4-phenyl-3-oxazolidine acetic acid-Cha-Trp, and 4-piperazine acetic acid-Cha-Trp.